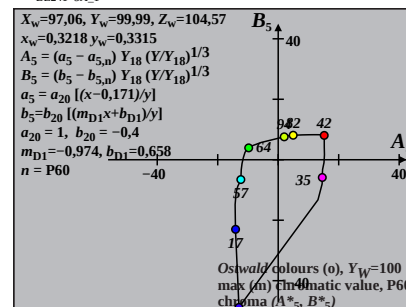
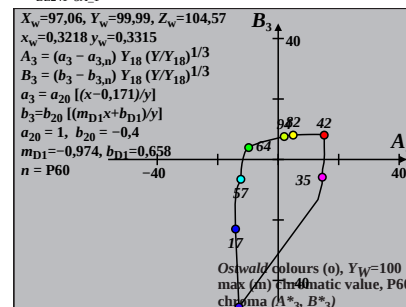
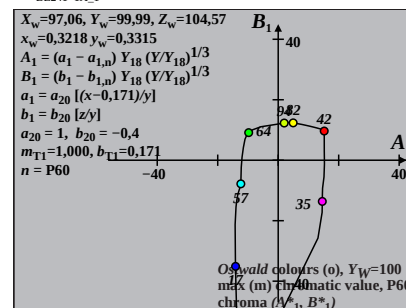
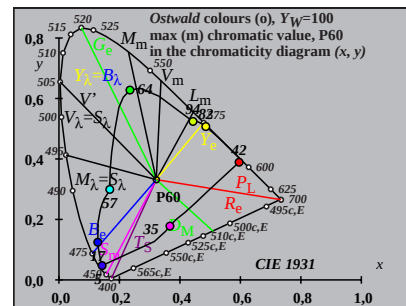


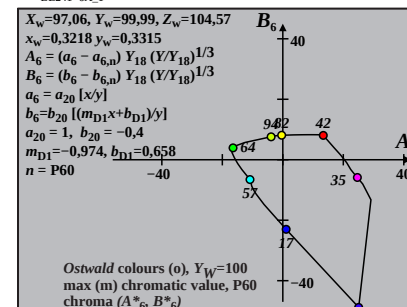
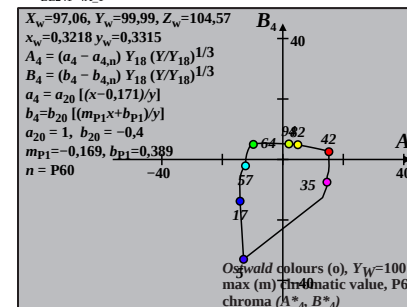
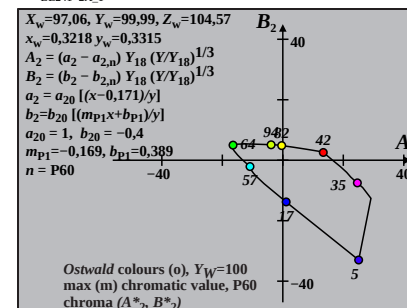
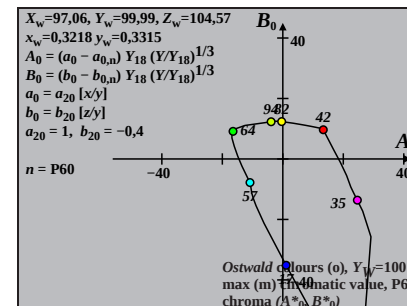
Ostwald optimal colours (o) of maximum (m) C_{AB} for P60, $Y_w=100$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*	a^*	b^*	C^*_{ab}	a'	b'	h_{ab}	i_d, λ_d	i_c, λ_c	Code
0	405	32	563	80.6	-69.04	-32.83	76.45	0.1809	-0.1017	205.4	16 483 38 590 Cm
6	435	32	563	80.9	-85.01	-17.38	86.77	0.1727	-0.0938	191.5	17 487 44 621
10	450	33	565	81.24	-110.59	13.51	111.41	0.1596	-0.0781	173.0	19 497 -1 497c
11	460	33	566	81.91	-114.9	24.29	117.44	0.1578	-0.0727	168.0	20 502 -1 502c
13	465	33	568	82.21	-122.74	45.93	131.05	0.154	-0.0619	159.4	22 513 -1 513c
14	470	34	570	83.01	-122.36	57.87	135.35	0.1547	-0.0561	154.6	24 521 -1 521c
15	475	34	574	84.33	-117.73	70.24	137.09	0.1578	-0.0504	149.1	25 529 -1 529c Gm
15	480	36	580	86.98	-106.76	74.78	130.35	0.1647	-0.0492	144.9	27 535 -1 535c
17	485	39	595	90.78	-80.88	99.33	128.1	0.1788	-0.0391	129.1	29 549 -1 549c
18	490	-1	490c	97.72	-21.98	119.18	121.19	0.2072	-0.0333	100.4	33 566 11 459 max
19	495	-1	495c	97.14	-19.56	125.55	127.06	0.2082	-0.0302	98.8	33 567 12 461
20	500	-1	500c	96.4	-16.41	131.28	132.3	0.2095	-0.0273	97.1	33 568 12 464
22	510	-1	510c	94.31	-7.64	140.4	140.61	0.2134	-0.0222	93.1	34 570 13 469
24	520	-1	520c	91.27	4.18	144.83	144.89	0.2189	-0.0181	88.3	34 572 14 473 Ym
25	530	-1	529c	89.41	10.85	145.41	145.81	0.2221	-0.0163	85.7	34 574 15 475
27	540	-1	539c	85.1	25.03	142.59	144.77	0.2294	-0.0133	80.0	35 578 15 478
29	545	-1	545c	80.08	39.56	136.03	141.66	0.2376	-0.011	73.7	36 582 16 480
29	550	-1	549c	80.08	39.56	136.03	141.66	0.2376	-0.011	73.7	36 582 16 480
30	555	-1	554c	77.33	46.69	131.81	139.84	0.2421	-0.0103	70.4	36 584 16 481
32	560	-1	560c	71.36	60.13	122.12	136.13	0.2515	-0.0093	63.7	37 589 16 483
32	563	0	405	71.04	61.19	108.28	124.37	0.2523	-0.0235	60.5	38 590 16 483 Rm
32	563	6	435	70.67	71.54	29.52	77.39	0.2584	-0.0682	22.4	44 621 17 487
33	565	10	450	70.24	85.56	-14.39	86.76	0.2668	-0.0932	350.4	-1 497c 19 497
33	566	11	460	69.38	89.91	-23.58	92.95	0.2699	-0.0986	345.3	-1 502c 20 502
33	568	13	465	68.98	94.51	-36.41	101.28	0.2729	-0.1061	338.9	-1 513c 22 513
34	570	14	470	67.89	97.55	-42.59	106.45	0.2754	-0.11	336.4	-1 521c 24 521
34	574	15	475	65.98	101.03	-49.17	112.36	0.2789	-0.1145	334.0	-1 529c 25 529 Mm
36	580	15	480	61.69	107.7	-56.56	121.65	0.2867	-0.1209	332.2	-1 535c 27 535
39	595	17	485	54.03	111.06	-74.04	133.48	0.2967	-0.1371	326.3	-1 549c 29 549
-1	490c	18	490	28.86	88.41	-118.79	148.08	0.3162	-0.2156	306.6	11 459 33 566 min
-1	495c	19	495	32.32	73.79	-113.85	135.67	0.2938	-0.2012	302.9	12 461 33 567
-1	500c	20	500	36.05	57.8	-108.2	122.68	0.2728	-0.1875	298.1	12 464 33 568
-1	510c	22	510	44.26	23.08	-95.07	97.84	0.2362	-0.1628	283.6	13 469 34 570
-1	520c	24	520	52.87	-10.61	-80.73	81.42	0.2091	-0.1428	262.5	14 473 34 572 Bm
-1	529c	25	530	57.04	-25.1	-73.7	77.86	0.1996	-0.1347	251.1	15 475 34 574
-1	539c	27	540	64.8	-47.72	-60.51	77.07	0.1872	-0.1219	231.7	15 478 35 578
-1	545c	29	545	71.68	-61.73	-48.74	78.66	0.1814	-0.1124	218.2	16 480 36 582
-1	549c	29	550	71.68	-61.73	-48.74	78.66	0.1814	-0.1124	218.2	16 480 36 582
-1	554c	30	555	74.78	-65.73	-43.42	78.78	0.1804	-0.1086	213.4	16 481 36 584
-1	560c	32	560	80.34	-68.41	-33.85	76.33	0.1811	-0.1023	206.3	16 483 37 589
380	770	100.0	0.0	0.0	0.0	0.0	0.2169	-0.085	0.0		

TUB-test chart BE24; CIE (x, y) and chroma (A^*_i, B^*_i)
Ostwald optimal colours for illuminant P60; diagram for illuminant P60, $Y_w=100$



BE241-7A_1



BE241-8A_1

TUB registration: 20170801-BE24/BE24L0NP.PDF / .PS
application for measurement of offset print output

TUB material: code=rha4ta

input: w/rgb/cmyk -> rgb

see similar files: <http://farbe.li-tu-berlin.de/BE24/BE24.HTM>
technical information: <http://farbe.li-tu-berlin.de> or <http://130.149.60.45/~farbmetrik>

Ostwald optimal colours (o) of maximum (m) C_{AB} for P55, $Y_w=100$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*	a^*	b^*	C^*_{ab}	a'	b'	h_{ab}	i_d, λ_d	i_c, λ_c	Code
1 405	32 564	80.5	-72.98	-32.59	79.93	0.1791	-0.0988	204.0	16 484	38 591	Cm
6 435	32 564	80.78	-86.91	-18.11	88.78	0.1719	-0.0915	191.7	17 488	43 619	
9 450	33 565	81.19	-103.91	3.69	103.98	0.1633	-0.0808	177.9	18 494	-1 494c	
11 460	33 567	81.69	-113.93	22.75	116.18	0.1584	-0.0714	168.7	20 502	-1 502c	
13 465	33 568	81.97	-121.2	44.2	129.01	0.1548	-0.0609	159.9	22 513	-1 513c	
14 470	34 570	82.7	-120.79	55.97	133.13	0.1555	-0.0554	155.1	24 521	-1 521c	
15 475	34 574	83.91	-116.62	68.14	135.07	0.1583	-0.0499	149.7	25 529	-1 529c	Gm
16 480	36 580	86.0	-106.74	81.13	134.08	0.1644	-0.0444	142.7	27 537	-1 537c	
17 485	38 592	89.73	-84.48	96.17	128.01	0.1769	-0.039	131.2	29 547	-1 547c	
17 490	-1 489c	98.31	-21.18	110.91	112.91	0.2078	-0.0361	100.8	33 566	11 456	max
19 495	-1 495c	97.31	-17.18	124.55	125.73	0.2095	-0.0299	97.8	33 567	12 462	
19 500	-1 499c	97.31	-17.18	124.55	125.73	0.2095	-0.0299	97.8	33 567	12 462	
21 510	-1 509c	95.7	-10.35	135.56	135.96	0.2125	-0.0244	94.3	33 569	13 467	
24 520	-1 520c	91.64	5.75	145.62	145.74	0.2199	-0.018	87.7	34 573	14 474	Ym
26 530	-1 530c	87.83	19.09	145.42	146.67	0.2264	-0.0146	82.5	35 576	15 477	
27 540	-1 539c	85.63	26.14	143.5	145.86	0.2301	-0.0132	79.6	35 578	15 479	
28 545	-1 544c	83.25	33.29	140.65	144.54	0.2341	-0.012	76.6	36 580	16 480	
30 550	-1 550c	77.99	47.5	132.94	141.17	0.2427	-0.0102	70.3	37 585	16 482	
30 555	-1 554c	77.99	47.5	132.94	141.17	0.2427	-0.0102	70.3	37 585	16 482	
32 560	-1 560c	72.09	60.84	123.37	137.56	0.252	-0.0092	63.7	38 590	16 484	
32 564	1 405	71.16	63.39	100.63	118.93	0.2538	-0.0272	57.7	38 591	16 484	Rm
32 564	6 435	70.82	72.23	31.03	78.62	0.2591	-0.0654	23.2	43 619	17 488	
33 565	9 450	70.31	82.25	-4.44	82.37	0.2652	-0.085	356.9	-1 494c	18 494	
33 567	11 460	69.66	88.69	-22.25	91.44	0.2694	-0.095	345.9	-1 502c	20 502	
33 568	13 465	69.3	92.92	-35.25	99.39	0.2721	-0.1024	339.2	-1 513c	22 513	
34 570	14 470	68.32	95.59	-41.34	104.15	0.2743	-0.1061	336.6	-1 521c	24 521	
34 574	15 475	66.61	98.69	-47.69	109.61	0.2774	-0.1102	334.2	-1 529c	25 529	Mm
36 580	16 480	63.36	102.9	-55.81	117.06	0.2825	-0.1163	331.5	-1 537c	27 537	
38 592	17 485	56.37	107.59	-69.76	128.23	0.2921	-0.1288	327.0	-1 547c	29 547	
-1 489c	17 490	24.71	96.78	-124.34	157.56	0.3372	-0.2291	307.8	11 456	33 566	min
-1 495c	19 495	31.36	69.01	-115.35	134.41	0.2907	-0.1994	300.8	12 462	33 567	
-1 499c	19 500	31.36	69.01	-115.35	134.41	0.2907	-0.1994	300.8	12 462	33 567	
-1 509c	21 510	39.09	35.95	-103.46	109.53	0.2501	-0.1726	289.1	13 467	33 569	
-1 520c	24 520	51.95	-15.41	-82.28	83.71	0.2057	-0.1406	259.3	14 474	34 573	Bm
-1 530c	26 530	60.16	-42.21	-68.42	80.39	0.1892	-0.1256	238.3	15 477	35 576	
-1 539c	27 540	63.97	-52.33	-61.93	81.08	0.1842	-0.1197	229.8	15 479	35 578	
-1 544c	28 545	67.55	-60.24	-55.8	82.12	0.1808	-0.1146	222.8	16 480	36 580	
-1 550c	30 550	74.07	-69.84	-44.63	82.88	0.1781	-0.1063	212.5	16 482	37 585	
-1 554c	30 555	74.07	-69.84	-44.63	82.88	0.1781	-0.1063	212.5	16 482	37 585	
-1 560c	32 560	79.73	-72.07	-34.9	80.08	0.1792	-0.1	205.8	16 484	38 590	
380	770	100.0	0.0	0.0	0.0	0.2172	-0.0826	0.0			

TUB-test chart BE24; CIE (x, y) and chroma (A^*_i, B^*_i)
Ostwald optimal colours for illuminant P55; diagram for illuminant P55, $Y_w=100$

input: w/rgb/cmyk -> rgb

TUB registration: 20170801-BE24/BE24L0NP.PDF /.PS
application for measurement of offset print output

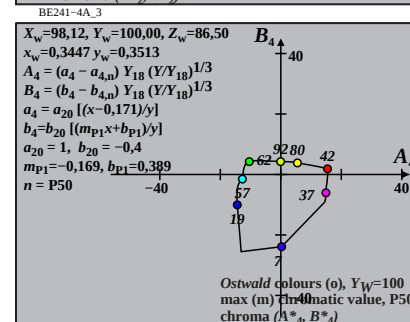
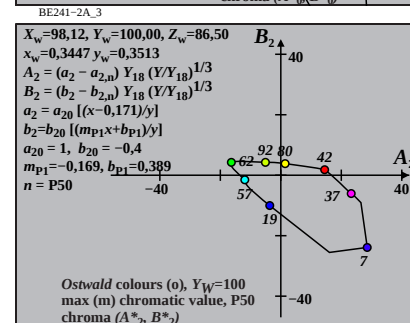
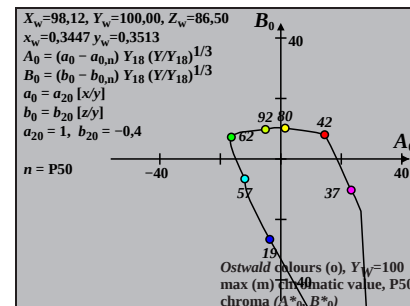
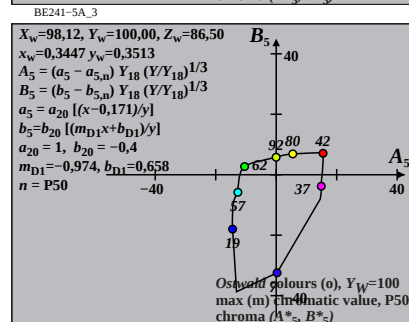
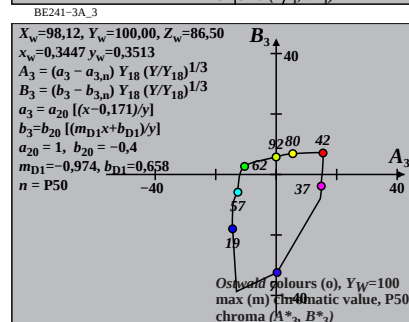
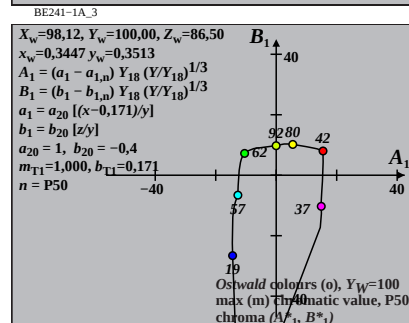
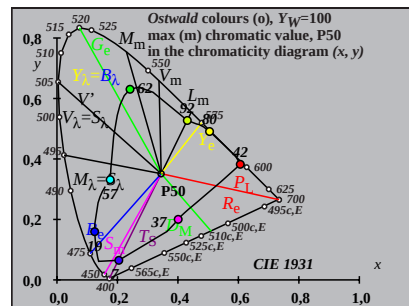
TUB material: code=rha4ta

Ostwald optimal colours (o) of maximum (m) C_{AB} for P50, $Y_w=100$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*	a^*	b^*	C^*_{ab}	a'	b'	h_{ab}	i_d, λ_d	i_c, λ_c	Code
0 405	33 565	80.38	-76.36	-33.29	83.3	0.1776	-0.0958	203.5	17 485	38 592	Cm
7 435	33 565	80.58	-93.88	-13.06	94.78	0.1686	-0.086	187.9	18 490	-1 490c	
9 450	33 566	80.98	-103.84	2.21	103.87	0.1636	-0.0787	178.7	19 495	-1 495c	
11 460	33 568	81.44	-112.86	20.91	114.78	0.1592	-0.0698	169.5	20 502	-1 502c	
12 465	33 569	81.88	-115.94	31.86	120.24	0.1578	-0.0647	164.6	21 507	-1 507c	
14 470	34 571	82.33	-118.97	53.7	130.53	0.1565	-0.0545	155.7	24 520	-1 520c	
15 475	34 574	83.42	-115.33	65.64	132.7	0.1591	-0.0492	150.3	25 528	-1 528c	Gm
16 480	35 579	85.29	-106.57	78.25	132.22	0.1645	-0.044	143.7	27 536	-1 536c	
16 485	37 589	89.01	-88.97	84.61	122.78	0.1749	-0.0424	136.4	28 544	-1 544c	
17 490	47 636	97.22	-28.87	107.37	111.19	0.2048	-0.0358	105.0	33 565	-1 565c	max
19 495	-1 495c	97.5	-14.61	123.31	124.17	0.2112	-0.0295	96.7	33 568	12 462	
20 500	-1 500c	96.83	-11.75	129.27	129.81	0.2124	-0.0267	95.1	33 569	13 465	
21 510	-1 509c	95.98	-8.12	134.59	134.83	0.214	-0.0241	93.4	34 570	13 468	
24 520	-1 520c	92.08	7.36	144.51	144.7	0.2211	-0.0178	87.0	34 574	14 474	Ym
26 530	-1 530c	88.38	20.31	146.42	147.82	0.2275	-0.0145	82.1	35 577	15 478	
28 540	-1 540c	83.93	34.2	141.8	145.87	0.235	-0.0119	76.4	36 581	16 481	
28 545	-1 544c	83.93	34.2	141.8	145.87	0.235	-0.0119	76.4	36 581	16 481	
30 550	-1 550c	78.77	48.19	134.27	142.66	0.2434	-0.0102	70.2	37 585	16 483	
30 555	-1 554c	78.77	48.19	134.27	142.66	0.2434	-0.0102	70.2	37 585	16 483	
32 560	-1 560c	72.97	61.4	124.87	139.15	0.2525	-0.0092	63.8	38 590	17 485	
33 565	0 405	71.32	65.08	112.25	129.75	0.2553	-0.0211	59.8	38 592	17 485	Rm
33 565	7 435	71.07	75.29	19.88	77.87	0.2614	-0.0692	14.7	-1 490c	18 490	
33 566	9 450	70.57	81.53	-2.69	81.57	0.2653	-0.0812	358.1	-1 495c	19 495	
33 568	11 460	69.99	87.29	-20.64	89.7	0.269	-0.0909	346.6	-1 502c	20 502	
33 569	12 465	69.42	90.28	-28.54	94.68	0.2711	-0.0952	342.4	-1 507c	21 507	
34 571	14 470	68.82	93.35	-39.87	101.51	0.2733	-0.1015	336.8	-1 520c	24 520	
34 574	15 475	67.31	96.05	-45.97	106.49	0.2759	-0.1053	334.4	-1 528c	25 528	Mm
35 579	16 480	64.5	99.59	-53.45	113.03	0.2802	-0.1105	331.7	-1 536c	27 536	
37 589	16 485	57.87	106.87	-64.87	125.01	0.2908	-0.1204	328.7	-1 544c	28 544	
47 636	17 490	31.87	98.12	-111.66	148.65	0.3213	-0.1878	311.3	-1 565c	33 565	min
-1 495c	19 495	30.21	63.32	-117.12	133.14	0.287	-0.1972	298.3	12 462	33 568	
-1 500c	20 500	33.93	47.38	-111.57	121.22	0.2657	-0.1833	293.0	13 465	33 569	
-1 509c	21 510	37.93	30.3	-105.34	109.61	0.2461	-0.1702	286.0	13 468	34 570	
-1 520c	24 520	50.83	-21.06	-84.16	86.75	0.2017	-0.1381	255.9	14 474	34 574	Bm
-1 530c	26 530	59.1	-47.73	-70.21	84.9	0.1856	-0.123	235.7	15 478	35 577	
-1 540c	28 540	66.58	-65.46	-57.47	87.11	0.1776	-0.112	221.2	16 481	36 581	
-1 544c	28 545	66.58	-65.46	-57.47	87.11	0.1776	-0.112	221.2	16 481	36 581	
-1 550c	30 550	73.2	-74.61	-46.12	87.72	0.1754	-0.1037	211.7	16 483	37 585	
-1 554c	30 555	73.2	-74.61	-46.12	87.72	0.1754	-0.1037	211.7	16 483	37 585	
-1 560c	32 560	78.98	-76.31	-36.2	84.46	0.1771	-0.0974	205.3	17 485	38 590	
380	770	100.0	0.0	0.0	0.0	0.2177	-0.0798	0.0			

TUB-test chart BE24; CIE (x, y) and chroma (A^*_i, B^*_i)
Ostwald optimal colours for illuminant P50; diagram for illuminant P50, $Y_w=100$

input: w/rgb/cmyk -> rgb



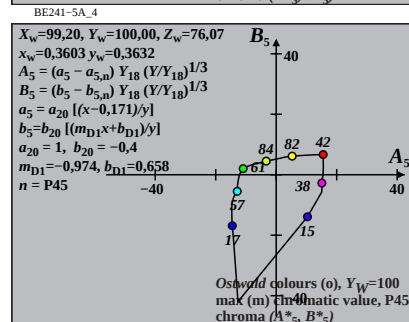
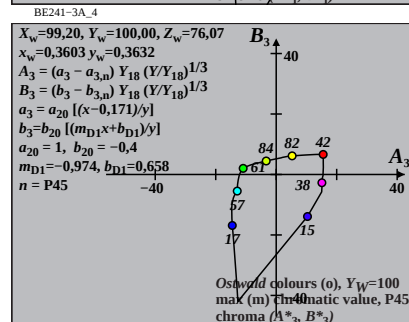
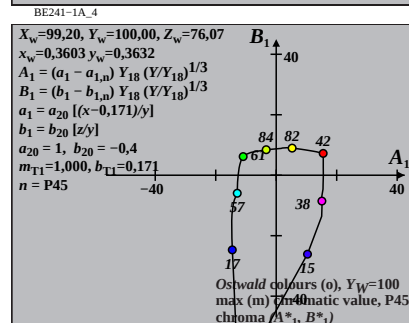
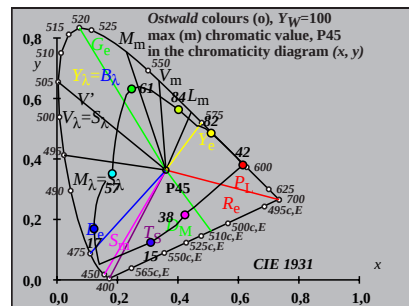
Ostwald optimal colours (o) of maximum (m) C_{AB} for P45, $Y_w=100$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*	a^*	b^*	C^*_{ab}	a'	b'	h_{ab}	i_d, λ_d	i_c, λ_c	Code
1	405	33	566	80.19	-80.6	-33.27	87.2	0.176	-0.0918	202.4	17 487 38 593 Cm
7	435	33	567	80.37	-95.16	-14.37	96.24	0.1684	-0.083	188.5	18 491 -1 491c
10	450	33	568	80.65	-108.48	8.6	108.82	0.1615	-0.0725	175.4	19 498 -1 498c
12	460	33	569	80.99	-115.64	28.5	119.1	0.158	-0.0634	166.1	21 507 -1 507c
13	465	34	570	81.34	-117.42	39.59	123.92	0.1573	-0.0584	161.3	22 512 -1 512c
13	470	34	571	82.12	-114.86	40.91	121.93	0.1591	-0.0579	160.3	22 514 -1 514c
15	475	34	574	82.87	-113.79	62.62	129.88	0.1601	-0.0483	151.1	25 528 -1 528c Gm
15	480	35	578	84.81	-106.37	65.96	125.16	0.165	-0.0474	148.1	26 532 -1 532c
17	485	37	587	87.37	-90.72	88.42	126.68	0.174	-0.0385	135.7	28 544 -1 544c
17	490	42	611	94.08	-50.55	99.92	111.98	0.1952	-0.0361	116.8	31 559 -1 559c max
19	495	-1	495c	97.73	-11.88	121.73	122.3	0.2132	-0.0289	95.5	33 569 12 463
20	500	-1	500c	97.1	-9.19	127.84	128.17	0.2143	-0.0263	94.1	34 570 13 466
22	510	-1	510c	95.29	-1.58	137.89	137.9	0.2177	-0.0214	90.6	34 572 14 471
24	520	-1	520c	92.59	8.95	143.87	144.15	0.2226	-0.0176	86.4	34 574 15 475 Ym
26	530	-1	530c	89.04	21.42	147.61	149.16	0.2288	-0.0144	81.7	35 578 15 479
27	540	-1	539c	86.98	28.1	145.84	148.53	0.2323	-0.013	79.0	35 579 16 480
29	545	-1	545c	82.31	41.81	139.81	145.93	0.24	-0.0109	73.3	36 583 16 483
29	550	-1	549c	82.31	41.81	139.81	145.93	0.24	-0.0109	73.3	36 583 16 483
30	555	-1	554c	79.71	48.64	135.87	144.31	0.2442	-0.0101	70.3	37 585 16 484
31	560	-1	559c	76.95	55.31	131.46	142.62	0.2486	-0.0096	67.1	37 588 17 485
33	566	1	405	71.54	67.01	103.65	123.43	0.2573	-0.0238	57.1	38 593 17 487 Rm
33	567	7	435	71.33	75.3	22.16	78.49	0.2622	-0.0652	16.3	-1 491c 18 491
33	568	10	450	70.99	82.55	-9.46	83.09	0.2666	-0.0812	353.4	-1 498c 19 498
33	569	12	460	70.55	86.92	-25.45	90.57	0.2694	-0.0895	343.6	-1 507c 21 507
34	570	13	465	70.11	88.96	-32.14	94.58	0.2709	-0.093	340.1	-1 512c 22 512
34	571	13	470	69.1	90.69	-33.87	96.81	0.2725	-0.0941	339.5	-1 514c 22 514
34	574	15	475	68.09	93.08	-43.97	102.95	0.2746	-0.0996	334.7	-1 528c 25 528 Mm
35	578	15	480	65.25	97.37	-48.86	108.94	0.2792	-0.1031	333.3	-1 532c 26 532
37	587	17	485	60.99	99.61	-61.03	116.83	0.2841	-0.1116	328.5	-1 544c 28 544
42	611	17	490	44.99	102.55	-88.6	135.52	0.3037	-0.1409	319.1	-1 559c 31 559 min
-1	495c	19	495	28.81	56.51	-119.25	131.96	0.2825	-0.1945	295.3	12 463 33 569
-1	500c	20	500	32.52	40.63	-113.78	120.82	0.261	-0.1805	289.6	13 466 34 570
-1	510c	22	510	40.74	5.93	-100.84	101.02	0.2238	-0.1553	273.3	14 471 34 572
-1	520c	24	520	49.46	-27.74	-86.46	90.8	0.197	-0.135	252.2	15 475 34 574 Bm
-1	530c	26	530	57.8	-54.21	-72.43	90.47	0.1812	-0.1199	233.1	15 479 35 578
-1	539c	27	540	61.69	-64.02	-65.82	91.82	0.1767	-0.114	225.7	16 480 35 579
-1	545c	29	545	68.85	-76.87	-53.59	93.71	0.1725	-0.1044	214.8	16 483 36 583
-1	549c	29	550	68.85	-76.87	-53.59	93.71	0.1725	-0.1044	214.8	16 483 36 583
-1	554c	30	555	72.11	-80.15	-47.99	93.42	0.1723	-0.1006	210.9	16 484 37 585
-1	559c	31	560	75.17	-81.55	-42.73	92.07	0.1731	-0.0972	207.6	17 485 37 588
380	770	100.0	0.0	0.0	0.0	0.0	0.2185	-0.0764	0.0		

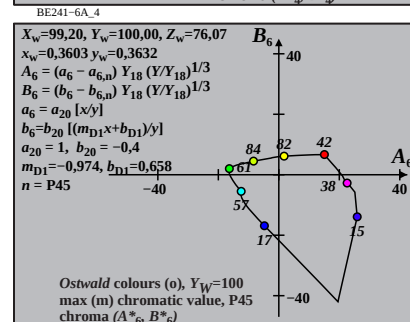
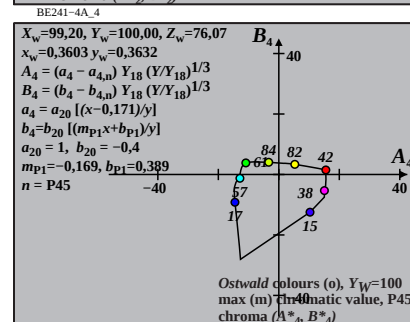
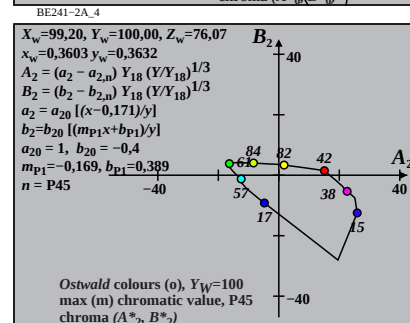
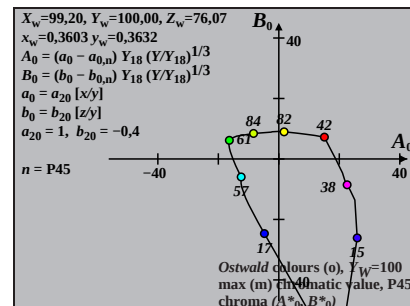
TUB-test chart BE24; CIE (x, y) and chroma (A^*_i, B^*_i)

Ostwald optimal colours for illuminant P45; diagram for illuminant P45, $Y_w=100$

input: w/rgb/cmyk -> rgb



BE241-7A_4



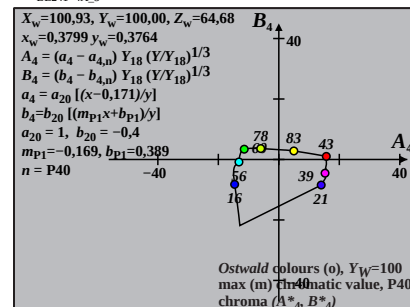
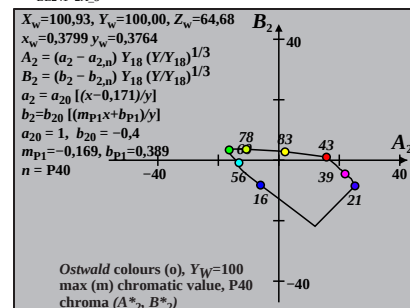
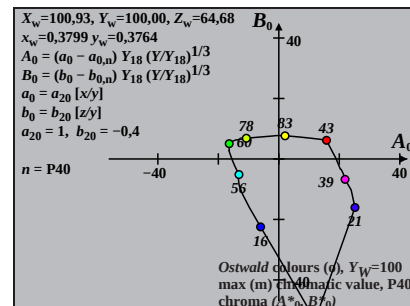
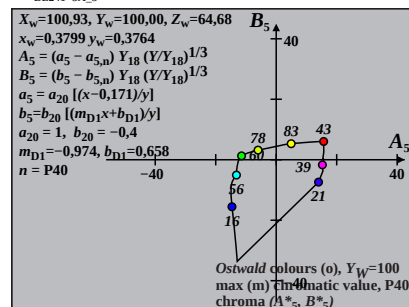
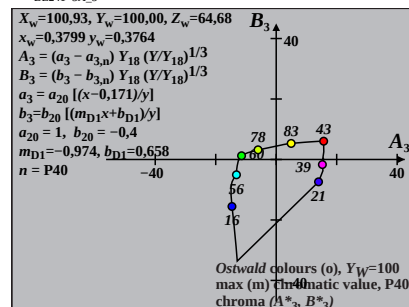
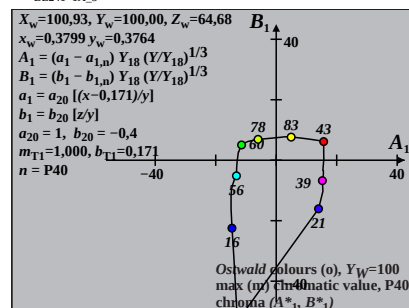
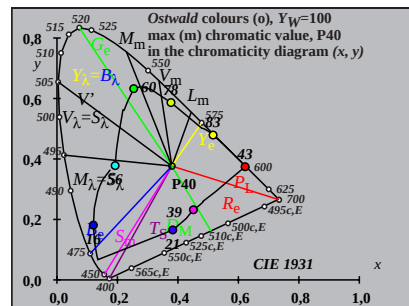
BE241-8A_4

Ostwald optimal colours (o) of maximum (m) C_{AB} for P40, $Y_w=100$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*	a^*	b^*	C^*_{ab}	a'	b'	h_{ab}	i_d, λ_d	i_c, λ_c	Code
0 405	33 568	79.95	-84.51	-34.12	91.14	0.1748	-0.0873	201.9	17 488	38 594	Cm
7 435	33 568	80.1	-96.58	-15.98	97.9	0.1685	-0.0794	189.3	18 493	54 674	
10 450	33 569	80.34	-107.65	6.16	107.83	0.1627	-0.0697	176.7	19 499	-1 499c	
12 460	34 570	80.63	-113.5	25.58	116.35	0.1598	-0.0613	167.2	21 507	-1 507c	
13 465	34 571	80.91	-114.78	36.41	120.41	0.1593	-0.0566	162.3	22 512	-1 512c	
14 470	34 572	81.39	-114.41	47.53	123.89	0.1598	-0.0519	157.4	23 519	-1 519c	
14 475	34 574	82.45	-111.22	49.34	121.68	0.1621	-0.0513	156.0	24 522	-1 522c Gm	
15 480	35 578	83.87	-105.72	61.75	122.43	0.1657	-0.0464	149.7	26 531	-1 531c	
17 485	37 585	86.02	-93.35	83.49	125.24	0.1731	-0.038	138.1	28 543	-1 543c	
17 490	40 600	91.25	-65.8	92.44	113.47	0.1884	-0.0362	125.4	30 554	-1 554c max	
19 495	-1 495c	97.98	-9.02	119.65	119.99	0.2157	-0.0283	94.3	34 571	12 464	
20 500	-1 500c	97.41	-6.56	125.94	126.11	0.2168	-0.0257	92.9	34 571	13 467	
21 510	-1 509c	96.66	-3.4	131.64	131.68	0.2182	-0.0233	91.4	34 572	13 469	
24 520	-1 520c	93.2	10.4	142.94	143.32	0.2246	-0.0173	85.8	35 575	15 476	Ym
26 530	-1 530c	89.83	22.28	149.05	150.71	0.2305	-0.0142	81.4	35 578	16 480	
27 540	-1 539c	87.86	28.7	147.39	150.16	0.2338	-0.0129	78.9	36 580	16 481	
29 545	-1 545c	83.37	41.99	141.62	147.72	0.2413	-0.0108	73.4	36 584	16 484	
29 550	-1 549c	83.37	41.99	141.62	147.72	0.2413	-0.0108	73.4	36 584	16 484	
31 555	-1 555c	78.17	55.22	133.54	144.51	0.2496	-0.0095	67.5	37 588	17 486	
32 560	-1 560c	75.32	61.53	128.87	142.81	0.2541	-0.0091	64.4	38 591	17 487	
33 568	0 405	71.84	68.49	117.18	135.73	0.2595	-0.0179	59.6	38 594	17 488	Rm
33 568	7 435	71.65	75.18	25.05	79.24	0.2635	-0.0604	18.4	54 674	18 493	
33 569	10 450	71.37	81.14	-6.9	81.43	0.2671	-0.0757	355.1	-1 499c	19 499	
34 570	12 460	71.01	84.71	-23.18	87.82	0.2694	-0.0836	344.6	-1 507c	21 507	
34 571	13 465	70.66	86.26	-29.94	91.31	0.2705	-0.0869	340.8	-1 512c	22 512	
34 572	14 470	70.05	87.8	-35.89	94.85	0.2718	-0.0899	337.7	-1 519c	23 519	
34 574	14 475	68.66	90.25	-38.28	98.03	0.2741	-0.0914	337.0	-1 522c	24 522	Mm
35 578	15 480	66.66	93.09	-45.56	103.65	0.2772	-0.0956	333.9	-1 531c	26 531	
37 585	17 485	63.33	95.05	-56.43	110.54	0.2808	-0.1023	329.3	-1 543c	28 543	
40 600	17 490	52.92	100.17	-74.36	124.76	0.2939	-0.1177	323.4	-1 554c	30 554	min
-1 495c	19 495	27.1	48.32	-121.83	131.07	0.277	-0.1913	291.6	12 464	34 571	
-1 500c	20 500	30.79	32.53	-116.48	120.94	0.2552	-0.1771	285.6	13 467	34 571	
-1 509c	21 510	34.77	15.53	-110.39	111.48	0.2353	-0.1638	278.0	13 469	34 572	
-1 520c	24 520	47.74	-35.63	-89.33	96.18	0.1912	-0.1313	248.2	15 476	35 575	Bm
-1 530c	26 530	56.15	-61.81	-75.22	97.36	0.176	-0.1162	230.5	16 480	35 578	
-1 539c	27 540	60.09	-71.38	-68.53	98.96	0.1719	-0.1102	223.8	16 481	36 580	
-1 545c	29 545	67.38	-83.62	-56.09	100.69	0.1686	-0.1007	213.8	16 484	36 584	
-1 549c	29 550	67.38	-83.62	-56.09	100.69	0.1686	-0.1007	213.8	16 484	36 584	
-1 555c	31 555	73.87	-87.57	-44.97	98.45	0.17	-0.0934	207.1	17 486	37 588	
-1 560c	32 560	76.81	-86.88	-39.92	95.61	0.172	-0.0905	204.6	17 487	38 591	
380	770	100.0	0.0	0.0	0.0	0.2197	-0.0724	0.0			

TUB-test chart BE24; CIE (x, y) and chroma (A^*_i, B^*_i)
Ostwald optimal colours for illuminant P40; diagram for illuminant P40, $Y_w=100$

input: w/rgb/cmyk -> rgb



TUB registration: 20170801-BE24/BE24L0NP.PDF /.PS
application for measurement of offset print output

TUB material: code=rh4ta

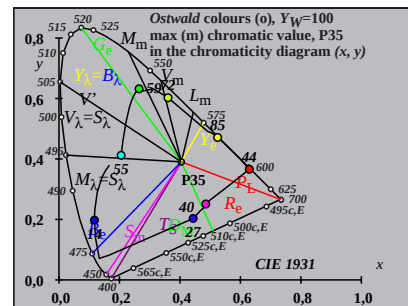
Ostwald optimal colours (o) of maximum (m) C_{AB} for P35, $Y_w=100$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*	a^*	b^*	C^*_{ab}	a'	b'	h_{ab}	i_d, λ_d	i_c, λ_c	Code
1 405	34 570	79.6	-89.05	-34.47	95.49	0.1738	-0.0816	201.1	18 490	39 596	Cm
7 435	34 570	79.72	-97.82	-18.06	99.47	0.1691	-0.0749	190.4	18 494	48 640	
9 450	34 571	79.96	-103.1	-4.65	103.2	0.1664	-0.0694	182.5	19 498	-1 498c	
12 460	34 572	80.13	-110.67	21.82	112.8	0.1625	-0.0586	168.8	21 507	-1 507c	
12 465	34 572	80.5	-109.66	22.44	111.94	0.1632	-0.0584	168.4	21 508	-1 508c	
14 470	34 573	80.76	-111.57	43.19	119.64	0.1624	-0.05	158.8	23 519	-1 519c	
14 475	35 575	81.62	-108.9	44.67	117.7	0.1643	-0.0496	157.6	24 520	-1 520c	Gm
15 480	35 578	82.78	-104.64	56.53	118.93	0.1672	-0.0451	151.6	25 529	-1 529c	
17 485	36 583	84.47	-95.01	77.44	122.57	0.173	-0.0373	140.8	28 542	-1 542c	
18 490	38 593	88.15	-75.14	91.83	118.66	0.1846	-0.0329	129.2	30 552	-1 552c	max
19 495	52 661	97.9	-8.98	116.21	116.55	0.2176	-0.0275	94.4	34 572	12 460	
20 500	-1 500c	97.76	-3.97	123.35	123.41	0.2199	-0.025	91.8	34 573	13 468	
22 510	-1 510c	96.24	2.41	134.39	134.41	0.2228	-0.0206	88.9	34 574	14 473	Ym
23 520	-1 519c	95.18	6.67	138.42	138.58	0.2248	-0.0187	87.2	35 576	15 475	
26 530	-1 530c	90.79	22.67	150.81	152.51	0.2326	-0.014	81.4	35 579	16 481	
27 540	-1 539c	88.93	28.75	149.28	152.02	0.2358	-0.0127	79.0	36 581	16 483	
29 545	-1 545c	84.67	41.49	143.85	149.71	0.2429	-0.0107	73.9	37 585	17 486	
29 550	-1 549c	84.67	41.49	143.85	149.71	0.2429	-0.0107	73.9	37 585	17 486	
31 555	-1 555c	79.69	54.35	136.13	146.58	0.2509	-0.0095	68.2	37 589	17 488	
32 560	-1 560c	76.94	60.55	131.62	144.88	0.2552	-0.0091	65.2	38 591	17 489	
34 570	1 405	72.25	69.9	108.28	128.89	0.2625	-0.0194	57.1	39 596	18 490	Rm
34 570	7 435	72.11	74.62	28.87	80.01	0.2653	-0.0547	21.1	48 640	18 494	
34 571	9 450	71.82	77.87	5.94	78.09	0.2673	-0.0648	4.3	-1 498c	19 498	
34 572	12 460	71.61	81.82	-20.16	84.27	0.2698	-0.0765	346.1	-1 507c	21 507	
34 572	12 465	71.17	82.58	-20.91	85.19	0.2704	-0.0769	345.7	-1 508c	21 508	
34 573	14 470	70.85	84.32	-33.08	90.58	0.2717	-0.0824	338.5	-1 519c	23 519	
35 575	14 475	69.76	86.12	-34.96	92.94	0.2734	-0.0835	337.9	-1 520c	24 520	Mm
35 578	15 480	68.21	88.29	-41.7	97.64	0.2756	-0.0869	334.7	-1 529c	25 529	
36 583	17 485	65.78	89.55	-51.39	103.25	0.278	-0.0921	330.1	-1 542c	28 542	
38 593	18 490	59.56	91.85	-63.93	111.91	0.2842	-0.1006	325.1	-1 552c	30 552	min
52 661	19 495	27.69	47.15	-120.29	129.2	0.2773	-0.1754	291.4	12 460	34 572	
-1 500c	20 500	28.6	22.83	-119.84	121.99	0.2481	-0.1728	280.7	13 468	34 573	
-1 510c	22 510	36.77	-11.57	-107.28	107.9	0.2104	-0.1472	263.8	14 473	34 574	
-1 519c	23 520	41.14	-28.86	-100.22	104.3	0.1957	-0.1362	253.9	15 475	35 576	Bm
-1 530c	26 530	54.01	-70.63	-78.81	105.83	0.1698	-0.1116	228.1	16 481	35 579	
-1 539c	27 540	58.02	-79.87	-72.05	107.56	0.1662	-0.1056	222.0	16 483	36 581	
-1 545c	29 545	65.46	-91.3	-59.37	108.91	0.164	-0.096	213.0	17 486	37 585	
-1 549c	29 550	65.46	-91.3	-59.37	108.91	0.164	-0.096	213.0	17 486	37 585	
-1 555c	31 555	72.14	-94.39	-47.93	105.86	0.1666	-0.0888	206.9	17 488	37 589	
-1 560c	32 560	75.19	-93.26	-42.69	102.57	0.1691	-0.0858	204.5	17 489	38 591	
380	770	100.0	0.0	0.0	0.0	0.2217	-0.0675	0.0			

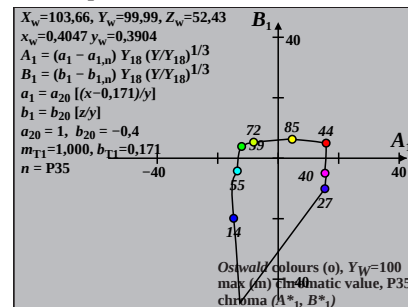
TUB-test chart BE24; CIE (x, y) and chroma (A^*_i, B^*_i)

Ostwald optimal colours for illuminant P35; diagram for illuminant P35, $Y_w=100$

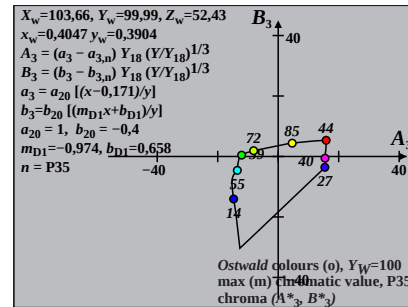
input: w/rgb/cmyk -> rgb



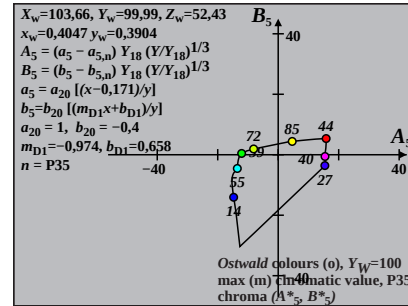
BE241-1A_6



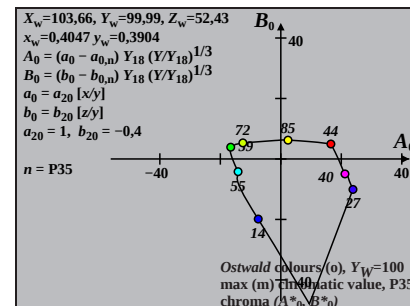
BE241-3A_6



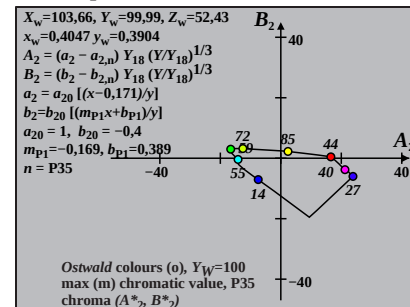
BE241-5A_6



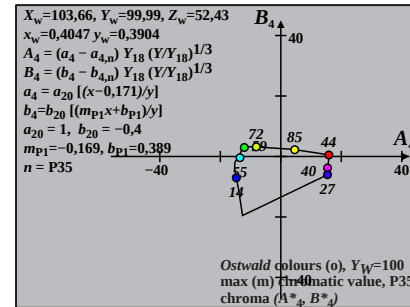
BE241-7A_6



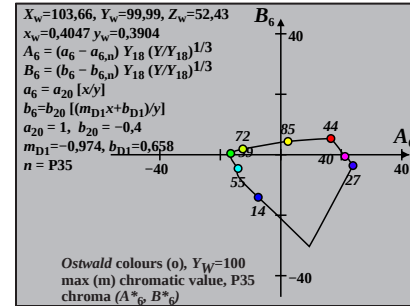
BE241-2A_6



BE241-4A_6



BE241-6A_6

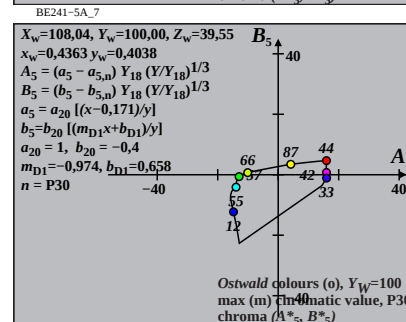
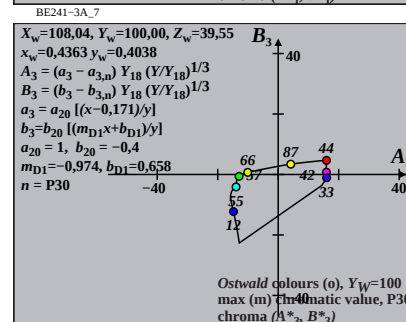
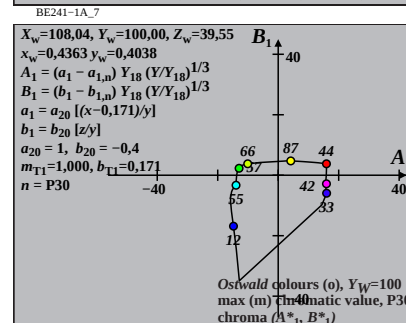
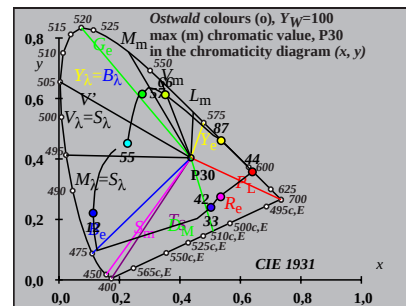


BE241-8A_6

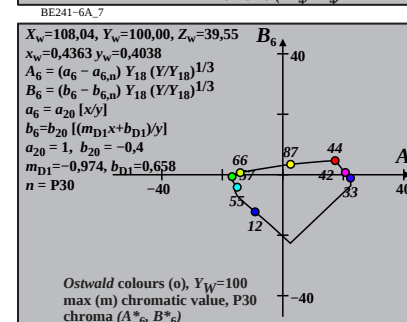
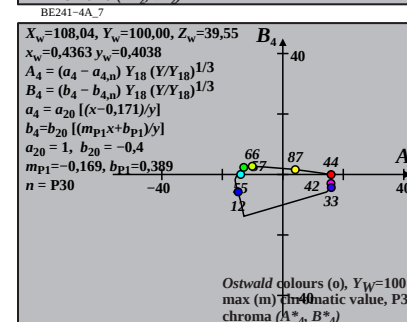
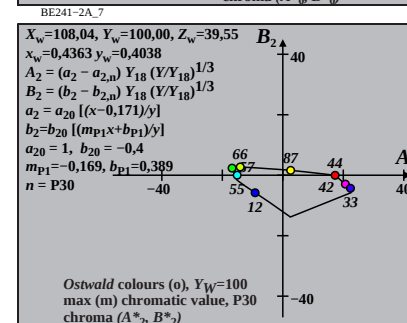
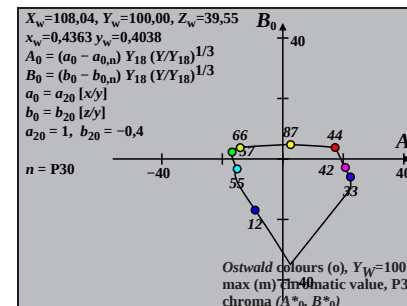
Ostwald optimal colours (o) of maximum (m) C_{AB} for P30, $Y_w=100$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*	a^*	b^*	C^*_{ab}	a'	b'	h_{ab}	i_d, λ_d	i_c, λ_c	Code
0	405	34	573	79.06	-92.29	-35.75	98.97	0.1741	-0.0748	201.1	18 493 39 598 Cm
6	435	34	573	79.18	-96.4	-25.52	99.72	0.1719	-0.071	194.8	19 495 42 612
10	450	34	573	79.31	-104.18	-1.07	104.19	0.1677	-0.0618	180.5	20 502 -1 502c
12	460	34	574	79.48	-107.49	16.89	108.81	0.166	-0.0551	171.0	21 508 -1 508c
13	465	34	574	79.66	-108.35	27.05	111.68	0.1657	-0.0513	165.9	22 512 -1 512c
14	470	35	575	79.95	-108.0	37.47	114.32	0.166	-0.0475	160.8	23 518 -1 518c
15	475	35	576	80.43	-106.24	48.04	116.6	0.1673	-0.0437	155.6	25 525 -1 525c Gm
16	480	35	579	81.28	-102.72	58.74	118.33	0.1697	-0.0399	150.2	26 533 -1 533c
17	485	36	582	82.72	-95.86	69.87	118.63	0.1741	-0.0362	143.9	28 540 -1 540c
18	490	37	589	85.35	-82.99	82.5	117.02	0.1821	-0.0324	135.1	29 549 -1 549c max
19	495	41	606	90.85	-52.17	99.6	112.43	0.1993	-0.0282	117.6	32 561 -1 561c
20	500	-1	500c	98.17	-1.61	119.65	119.66	0.224	-0.024	90.7	35 575 13 469
21	510	-1	509c	97.59	0.84	125.91	125.91	0.2252	-0.0219	89.6	35 576 14 472
24	520	-1	520c	94.78	12.07	139.33	139.85	0.2305	-0.0166	85.0	35 578 15 479 Ym
25	530	-1	529c	93.46	16.94	142.19	143.2	0.2328	-0.0151	83.2	36 580 16 481
28	540	-1	540c	88.37	33.76	149.47	153.23	0.2416	-0.0114	77.2	36 584 17 486
29	545	-1	545c	86.3	39.85	146.64	151.96	0.2451	-0.0105	74.7	37 586 17 488
30	550	-1	550c	84.05	46.02	143.26	150.47	0.2488	-0.0099	72.1	37 588 17 489
31	555	-1	555c	81.61	52.19	139.39	148.85	0.2527	-0.0094	69.4	38 590 18 490
32	560	-1	560c	78.99	58.24	135.11	147.13	0.2568	-0.009	66.6	38 592 18 491
34	573	0	405	72.87	70.02	122.48	141.09	0.2659	-0.0138	60.2	39 598 18 493 Rm
34	573	6	435	72.74	72.34	47.26	86.42	0.2673	-0.0424	33.1	42 612 19 495
34	573	10	450	72.59	76.31	1.25	76.32	0.2697	-0.0609	0.9	-1 502c 20 502
34	574	12	460	72.39	78.32	-16.01	79.94	0.271	-0.0679	348.4	-1 508c 21 508
34	574	13	465	72.18	79.27	-23.18	82.59	0.2717	-0.0708	343.6	-1 512c 22 512
35	575	14	470	71.84	80.03	-29.31	85.23	0.2723	-0.0733	339.8	-1 518c 23 518
35	576	15	475	71.25	80.82	-34.73	87.97	0.2731	-0.0756	336.7	-1 525c 25 525 Mm
35	579	16	480	70.2	81.98	-39.96	91.2	0.2744	-0.078	334.0	-1 533c 26 533
36	582	17	485	68.29	83.46	-45.88	95.24	0.2764	-0.0808	331.2	-1 540c 28 540
37	589	18	490	64.41	85.54	-54.6	101.49	0.2803	-0.0857	327.4	-1 549c 29 549 min
41	606	19	495	53.86	83.47	-74.37	111.79	0.2871	-0.0994	318.2	-1 561c 32 561
-1	500c	20	500	25.77	11.31	-124.08	124.59	0.2389	-0.1675	275.2	13 469 35 575
-1	509c	21	510	29.68	-5.34	-118.35	118.47	0.2187	-0.1539	267.4	14 472 35 576
-1	520c	24	520	42.61	-55.59	-97.8	112.5	0.1752	-0.121	240.3	15 479 35 578 Bm
-1	529c	25	530	46.94	-69.3	-90.64	114.1	0.1673	-0.1128	232.5	16 481 36 580
-1	540c	28	540	59.13	-95.65	-70.15	118.62	0.1583	-0.0947	216.2	17 486 36 584
-1	545c	29	545	62.85	-99.71	-63.81	118.38	0.1588	-0.0903	212.6	17 488 37 586
-1	550c	30	550	66.4	-101.68	-57.74	116.94	0.1604	-0.0864	209.5	17 489 37 588
-1	555c	31	555	69.77	-101.78	-51.97	114.28	0.1629	-0.083	207.0	18 490 38 590
-1	560c	32	560	72.96	-100.19	-46.5	110.46	0.166	-0.0801	204.8	18 491 38 592
380	770	100.0	0.0	0.0	0.0	0.0	0.2248	-0.0614	0.0		

TUB-test chart BE24; CIE (x, y) and chroma (A^*_i, B^*_i)
Ostwald optimal colours for illuminant P30; diagram for illuminant P30, $Y_w=100$



BE241-7A_7



BE241-8A_7

TUB registration: 20170801-BE24/BE24L0NP.PDF /PS
application for measurement of offset print output

TUB material: code=rha4ta

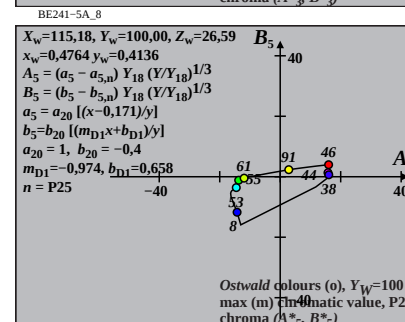
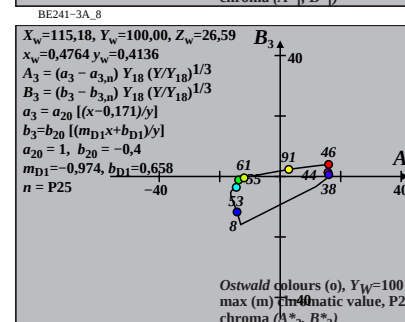
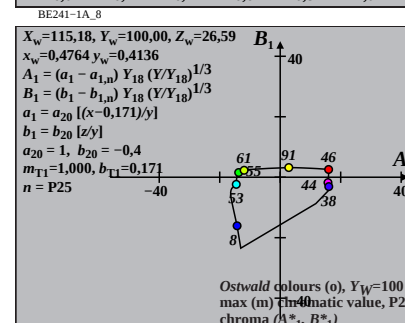
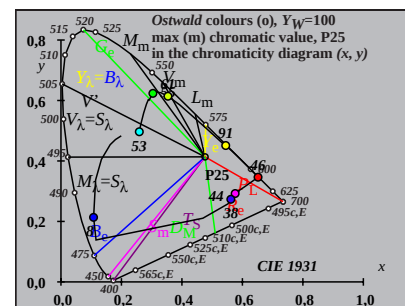
input: w/rgb/cmyk -> rgb

Ostwald optimal colours (o) of maximum (m) C_{AB} for P25, $Y_w=100$, $Y_m=520-770$

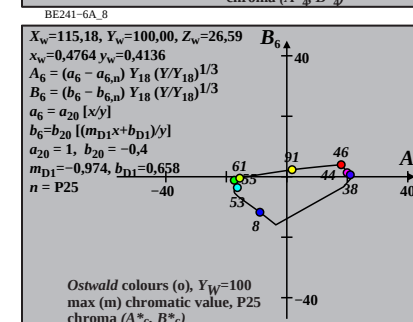
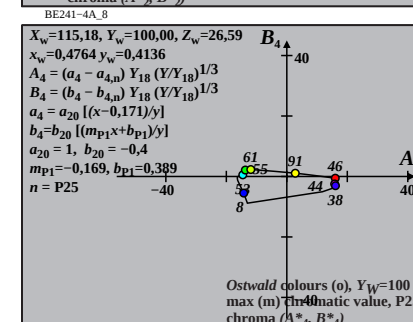
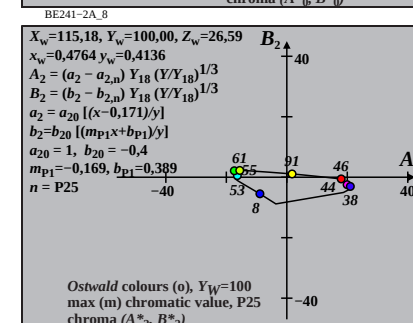
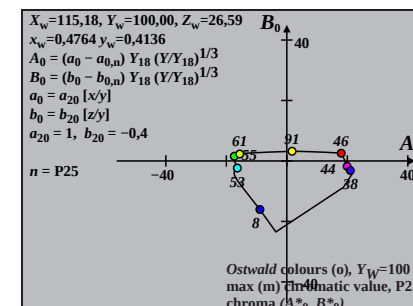
i ₁ , λ ₁	i ₂ , λ ₂	L*	a*	b*	C* _{ab}	a'	b'	h _{ab}	i _d , λ _d	i _c , λ _c	Code
1 405	35 576	78.24	−94.34	−37.02	101.35	0.1763	−0.0661	201.4	19 497	40 601	Cm
6 435	35 576	78.32	−96.46	−28.68	100.63	0.1751	−0.0633	196.5	19 499	42 611	
10 450	35 577	78.4	−100.94	−6.7	101.17	0.1726	−0.056	183.8	20 504	−1 504c	
11 460	35 577	78.58	−101.68	1.38	101.69	0.1723	−0.0534	179.2	21 506	−1 506c	
13 465	35 577	78.64	−103.32	19.67	105.18	0.1714	−0.0473	169.2	22 513	−1 513c	
14 470	35 578	78.84	−103.15	29.58	107.31	0.1717	−0.0441	163.9	23 518	−1 518c	
15 475	35 579	79.17	−102.15	39.61	109.56	0.1724	−0.0408	158.8	24 524	−1 524c	Gm
16 480	36 580	79.74	−99.8	49.68	111.48	0.1741	−0.0376	153.5	26 531	−1 531c	
17 485	36 582	80.7	−95.27	59.92	112.54	0.1771	−0.0345	147.8	27 539	−1 539c	
18 490	37 586	82.42	−87.46	70.97	112.63	0.1823	−0.0313	140.9	29 546	−1 546c	max
18 495	38 594	85.95	−73.66	76.97	106.54	0.1911	−0.0302	133.7	30 553	−1 553c	
20 500	44 620	93.35	−30.34	104.98	109.28	0.2148	−0.0238	106.1	34 570	−1 570c	
21 510	−1 509c	98.16	2.19	120.67	120.69	0.2306	−0.0208	88.9	35 578	14 474	
24 520	−1 520c	95.82	11.59	135.58	136.08	0.2351	−0.0159	85.1	36 581	16 481	Ym
25 530	−1 529c	94.69	15.79	139.05	139.94	0.2372	−0.0145	83.5	36 582	16 484	
28 540	−1 540c	90.22	30.79	152.71	155.79	0.2451	−0.0111	78.6	37 586	17 489	
28 545	−1 544c	90.22	30.79	152.71	155.79	0.2451	−0.0111	78.6	37 586	17 489	
29 550	−1 549c	88.37	36.37	150.2	154.54	0.2482	−0.0103	76.3	37 588	18 491	
30 555	−1 554c	86.32	42.11	147.15	153.05	0.2516	−0.0097	74.0	37 589	18 492	
32 560	−1 560c	81.65	53.73	139.66	149.64	0.2589	−0.0089	68.9	38 594	18 494	
35 576	1 405	73.8	68.72	124.19	141.93	0.2704	−0.0135	61.0	40 601	19 497	Rm
35 576	6 435	73.71	69.92	54.67	88.76	0.2712	−0.0348	38.0	42 611	19 499	
35 577	10 450	73.61	72.2	8.18	72.66	0.2726	−0.051	6.4	−1 504c	20 504	
35 577	11 460	73.42	73.02	−1.52	73.04	0.2731	−0.0543	358.8	−1 506c	21 506	
35 577	13 465	73.35	73.94	−17.46	75.97	0.2737	−0.0599	346.7	−1 513c	22 513	
35 578	14 470	73.13	74.44	−23.89	78.19	0.2741	−0.0622	342.2	−1 518c	23 518	
35 579	15 475	72.74	74.99	−29.42	80.56	0.2747	−0.0642	338.5	−1 524c	24 524	Mm
36 580	16 480	72.08	75.62	−34.41	83.08	0.2754	−0.066	335.5	−1 531c	26 531	
36 582	17 485	70.92	76.39	−39.42	85.97	0.2765	−0.068	332.7	−1 539c	27 539	
37 586	18 490	68.7	77.69	−45.6	90.08	0.2785	−0.0706	329.5	−1 546c	29 546	min
38 594	18 495	63.43	81.3	−54.66	97.97	0.2842	−0.0753	326.0	−1 553c	30 553	
44 620	20 500	47.27	67.08	−85.93	109.01	0.2861	−0.0963	307.9	−1 570c	34 570	
−1 509c	21 510	25.81	−18.19	−124.15	125.48	0.2064	−0.1467	261.6	14 474	35 578	
−1 520c	24 520	38.59	−67.19	−104.31	124.08	0.1639	−0.1135	237.2	16 481	36 581	Bm
−1 529c	25 530	42.92	−80.33	−97.24	126.13	0.1569	−0.1054	230.4	16 484	36 582	
−1 540c	28 540	55.3	−104.6	−76.61	129.66	0.1514	−0.0874	216.2	17 489	37 586	
−1 544c	28 545	55.3	−104.6	−76.61	129.66	0.1514	−0.0874	216.2	17 489	37 586	
−1 549c	29 550	59.14	−108.01	−70.1	128.77	0.153	−0.083	212.9	18 491	37 588	
−1 554c	30 555	62.82	−109.41	−63.82	126.67	0.1556	−0.0791	210.2	18 492	37 589	
−1 560c	32 560	69.72	−107.0	−52.03	118.98	0.1631	−0.0728	205.9	18 494	38 594	
380	770	100.0	0.0	0.0	0.0	0.2296	−0.0538	0.0			

TUB-test chart BE24; CIE (x, y) and chroma (A^*_i, B^*_i)

Ostwald optimal colours for illuminant P25; diagram for illuminant P25, $Y_w=100$



BE241-7A_8



BE241-8A_8

TUB registration: 20170801-BE24/BE24L0NP.PDF / .PS
application for measurement of offset print output

TUB material: code=rha4ta

input: w/rqb/cmyk $\rightarrow$ rqb